



BioMap and Living Waters

Guiding Land Conservation for Biodiversity in Massachusetts

Core Habitats of Nantucket

This report and associated map provide information about important sites for biodiversity conservation in your area.

This information is intended for conservation planning, and is not intended for use in state regulations.

Produced by:
Natural Heritage & Endangered Species Program
Massachusetts Division of Fisheries and Wildlife
Executive Office of Environmental Affairs
Commonwealth of Massachusetts

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BioMap and Living Waters:

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* Depending on the location of Core Habitats, your city or town may not have all of these sections.

Spring Salamander
(*Gyrinophilus porphyriticus*)
Species of Special Concern



Funding for this project was made available by the Executive Office of Environmental Affairs, contributions to the Natural Heritage & Endangered Species Fund, and through the State Wildlife Grants Program of the US Fish & Wildlife Service.



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Introduction

In this report, the Natural Heritage & Endangered Species Program provides you with site-specific biodiversity information for your area. Protecting our biodiversity today will help ensure the full variety of species and natural communities that comprise our native flora and fauna will persist for generations to come.

The information in this report is the result of two statewide biodiversity conservation planning projects, **BioMap** and **Living Waters**. The goal of the BioMap project, completed in 2001, was to identify and delineate the most important areas for the long-term viability of terrestrial, wetland, and estuarine elements of biodiversity in Massachusetts. The goal of the Living Waters project, completed in 2003, was to identify and delineate the rivers, streams, lakes, and ponds that are important for freshwater biodiversity in the Commonwealth. These two conservation plans are based on documented observations of rare species, natural communities, and exemplary habitats.

What is a Core Habitat?

Both BioMap and Living Waters delineate **Core Habitats** that identify the most critical sites for biodiversity conservation across the state. Core Habitats represent habitat for the state's most viable rare plant and animal populations and include exemplary natural communities and aquatic habitats. Core Habitats represent a wide diversity of rare species and natural communities (see Table 1), and these areas are also thought to contain virtually all of the other described species in Massachusetts. Statewide, BioMap Core Habitats encompass 1,380,000 acres of uplands and wetlands, and Living Waters identifies 429 Core Habitats in rivers, streams, lakes, and ponds.



Core Habitats and Land Conservation

One of the most effective ways to protect biodiversity for future generations is to protect Core Habitats from adverse human impacts through land conservation. For Living Waters Core Habitats, protection efforts should focus on the **riparian areas**, the areas of land adjacent to water bodies. A naturally vegetated buffer that extends 330 feet (100 meters) from the water's edge helps to maintain cooler water temperature and to maintain the nutrients, energy, and natural flow of water needed by freshwater species.

In Support of Core Habitats

To further ensure the protection of Core Habitats and Massachusetts' biodiversity in the long-term, the BioMap and Living Waters projects identify two additional areas that help support Core Habitats.

In BioMap, areas shown as **Supporting Natural Landscape** provide buffers around the Core Habitats, connectivity between Core Habitats, sufficient space for ecosystems to function, and contiguous undeveloped habitat for common species. Supporting Natural Landscape was



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generated using a Geographic Information Systems (GIS) model, and its exact boundaries are less important than the general areas that it identifies. Supporting Natural Landscape represents potential land protection priorities once Core Habitat protection has been addressed.

In Living Waters, *Critical Supporting Watersheds* highlight the immediate portion of the watershed that sustains, or possibly degrades, each freshwater Core Habitat. These areas were also identified using a GIS model. Critical Supporting Watersheds represent developed and undeveloped lands, and can be quite large. Critical Supporting Watersheds can be helpful in land-use planning, and while they are not shown on these maps, they can be viewed in the Living Waters report or downloaded from www.mass.gov/mgis.

Understanding Core Habitat Species, Community, and Habitat Lists

What's in the List?

Included in this report is a list of the species, natural communities, and/or aquatic habitats for each Core Habitat in your city or town. The lists are organized by Core Habitat number.

For the larger Core Habitats that span more than one town, the species and community lists refer to the entire Core Habitat, not just the portion that falls within your city or town. For a list of all the state-listed rare species within your city or town's boundary, whether or not they are in Core Habitat, please see the town rare species lists available at www.nhesp.org.

The list of species and communities within a Core Habitat contains only the species and

Table 1. The number of rare species and types of natural communities explicitly included in the BioMap and Living Waters conservation plans, relative to the total number of native species statewide.

BioMap		
Biodiversity Group	Species and Verified Natural Community Types	
	Included in BioMap	Total Statewide
Vascular Plants	246	1,538
Birds	21	221 breeding species
Reptiles	11	25
Amphibians	6	21
Mammals	4	85
Moths and Butterflies	52	An estimated 2,500 to 3,000
Damselflies and Dragonflies	25	An estimated 165
Beetles	10	An estimated 2,500 to 4,000
Natural Communities	92	> 105 community types
Living Waters		
Biodiversity Group	Species	
	Included in Living Waters	Total Statewide
Aquatic Vascular Plants	23	114
Fishes	11	57
Mussels	7	12
Aquatic Invertebrates	23	An estimated > 2500

natural communities that were explicitly included in a given BioMap or Living Waters Core Habitat. Other rare species or examples of other natural communities may fall within the Core Habitat, but for various reasons are not included in the list. For instance, there are a few rare species that are omitted from the list or summary because of their particular sensitivity to the threat of collection. Likewise, the content of many very small Core Habitats are not described in this report or list, often because they contain a single location of a rare plant



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species. Some Core Habitats were created for suites of common species, such as forest birds, which are particularly threatened by habitat fragmentation. In these cases, the individual common species are not listed.

What does 'Status' mean?

The Division of Fisheries and Wildlife determines a status category for each rare species listed under the Massachusetts Endangered Species Act, M.G.L. c.131A, and its implementing regulations, 321 CMR 10.00. Rare species are categorized as Endangered, Threatened, or of Special Concern according to the following:

- **Endangered** species are in danger of extinction throughout all or a significant portion of their range or are in danger of extirpation from Massachusetts.
- **Threatened** species are likely to become Endangered in Massachusetts in the foreseeable future throughout all or a significant portion of their range.
- **Special Concern** species have suffered a decline that could threaten the species if allowed to continue unchecked or occur in such small numbers or with such restricted distribution or specialized habitat requirements that they could easily become Threatened in Massachusetts.

In addition, the Natural Heritage & Endangered Species Program maintains an unofficial **watch list** of plants that are tracked due to potential conservation interest or concern, but are not regulated under the Massachusetts Endangered Species Act or other laws or regulations. Likewise, described natural communities are not regulated any laws or regulations, but they can help to identify ecologically important areas that are worthy of protection. The status of natural

Legal Protection of Biodiversity

BioMap and Living Waters present a powerful vision of what Massachusetts would look like with full protection of the land that supports most of our biodiversity. To create this vision, some populations of state-listed rare species were deemed more likely to survive over the long-term than others.

Regardless of their potential viability, all sites of state-listed species have full legal protection under the Massachusetts Endangered Species Act (M.G.L. c.131A) and its implementing regulations (321 CMR 10.00). Habitat of state-listed wildlife is also protected under the Wetlands Protection Act Regulations (310 CMR 10.37 and 10.59). The **Massachusetts Natural Heritage Atlas** shows **Priority Habitats**, which are used for regulation under the Massachusetts Endangered Species Act and Massachusetts Environmental Policy Act (M.G.L. c.30) and **Estimated Habitats**, which are used for regulation of rare wildlife habitat under the Wetlands Protection Act. For more information on rare species regulations, see the *Massachusetts Natural Heritage Atlas*, available from the Natural Heritage & Endangered Species Program in book and CD formats.

BioMap and Living Waters are conservation planning tools and do not, in any way, supplant the Estimated and Priority Habitat Maps which have regulatory significance. Unless and until the combined BioMap and Living Waters vision is fully realized, we must continue to protect all populations of our state-listed species and their habitats through environmental regulation.

communities reflects the documented number and acreages of each community type in the state:

- **Critically Imperiled** communities typically have 5 or fewer documented sites or have very few remaining acres in the state.
- **Imperiled** communities typically have 6-20 sites or few remaining acres in the state.
- **Vulnerable** communities typically have 21-100 sites or limited acreage across the state.
- **Secure** communities typically have over 100 sites or abundant acreage across the state; however excellent examples are identified as Core Habitat to ensure continued protection.



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Understanding Core Habitat Summaries

Following the BioMap and Living Waters Core Habitat species and community lists, there is a descriptive summary of each Core Habitat that occurs in your city or town. This summary highlights some of the outstanding characteristics of each Core Habitat, and will help you learn more about your city or town's biodiversity. You can find out more information about many of these species and natural communities by looking at specific *fact sheets* at www.nhesp.org.

Next Steps

BioMap and Living Waters were created in part to help cities and towns prioritize their land protection efforts. While there are many reasons to conserve land – drinking water protection, recreation, agriculture, aesthetics, and others – BioMap and Living Waters Core Habitats are especially helpful to municipalities seeking to protect the rare species, natural communities, and overall biodiversity within their boundaries. Please use this report and map along with the rare species and community fact sheets to appreciate and understand the biological treasures in your city or town.

Protecting Larger Core Habitats

Core Habitats vary considerably in size. For example, the average BioMap Core Habitat is 800 acres, but Core Habitats can range from less than 10 acres to greater than 100,000 acres. These larger areas reflect the amount of land needed by some animal species for breeding, feeding, nesting, overwintering, and long-term survival. Protecting areas of this size can be

very challenging, and requires developing partnerships with neighboring towns.

Prioritizing the protection of certain areas within larger Core Habitats can be accomplished through further consultation with Natural Heritage Program biologists, and through additional field research to identify the most important areas of the Core Habitat.

Additional Information

If you have any questions about this report, or if you need help protecting land for biodiversity in your community, the Natural Heritage & Endangered Species Program staff looks forward to working with you.

Contact the Natural Heritage & Endangered Species Program:

by Phone 508-792-7270, Ext. 200

by Fax: 508-792-7821

by Email: natural.heritage@state.ma.us.

by Mail: North Drive
Westborough, MA 01581

The GIS datalayers of BioMap and Living Waters Core Habitats are available for download from MassGIS: www.mass.gov/mgis

Check out www.nhesp.org for information on:

- Rare species in your town
- Rare species fact sheets
- BioMap and Living Waters projects
- Natural Heritage publications, including:
 - * Field guides
 - * Natural Heritage Atlas, and more!



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BioMap: Species and Natural Communities

Nantucket

Core Habitat BM1482

Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Maritime Dune Community		Imperiled
Maritime Juniper Woodland/Shrubland		Critically Imperiled

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
American Sea-Blite	<i>Suaeda calceoliformis</i>	Special Concern
Oysterleaf	<i>Mertensia maritima</i>	Endangered
Prickly Pear	<i>Opuntia humifusa</i>	Endangered
Sea-Beach Knotweed	<i>Polygonum glaucum</i>	Special Concern

Vertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Arctic Tern	<i>Sterna paradisaea</i>	Special Concern
Common Tern	<i>Sterna hirundo</i>	Special Concern
Landbird Migration Habitat		-----
Least Tern	<i>Sterna antillarum</i>	Special Concern
Piping Plover	<i>Charadrius melodus</i>	Threatened
Shorebird Migration Habitat		-----

Core Habitat BM1497

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Sea-Beach Knotweed	<i>Polygonum glaucum</i>	Special Concern

Vertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Common Tern	<i>Sterna hirundo</i>	Special Concern



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BioMap: Species and Natural Communities

Nantucket

Least Tern	<i>Sterna antillarum</i>	Special Concern
Northern Harrier	<i>Circus cyaneus</i>	Threatened
Piping Plover	<i>Charadrius melodus</i>	Threatened
Short-eared Owl	<i>Asio flammeus</i>	Endangered

Core Habitat BM1498

Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Estuarine Subtidal: Coastal Salt Pond		Imperiled
Kettlehole Level Bog		Imperiled
Sandplain Grassland		Critically Imperiled
Sandplain Heathland		Critically Imperiled

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Annual Peanut-Grass	<i>Amphicarpum amphicarpon</i>	Endangered
Bead Pinweed	<i>Lechea pulchella</i> var <i>moniliformis</i>	Endangered
Bicknell's Hawthorn	<i>Crataegus bicknellii</i>	Endangered
Brackish Bulrush	<i>Scirpus cylindricus</i>	Watch Listed
Broom Crowberry	<i>Corema conradii</i>	Special Concern
Bushy Rockrose	<i>Helianthemum dumosum</i>	Special Concern
Canadian Sanicle	<i>Sanicula canadensis</i>	Threatened
Creeping St. John's-Wort	<i>Hypericum adpressum</i>	Threatened
Eastern Silvery Aster	<i>Symphotrichum concolor</i>	Endangered
Foxtail Clubmoss	<i>Lycopodiella alopecuroides</i>	Endangered
Gypsywort	<i>Lycopus rubellus</i>	Endangered
Hairy Agrimony	<i>Agrimonia pubescens</i>	Threatened
Lesser Snakeroot	<i>Ageratina aromatica</i>	Endangered
Lion's Foot	<i>Nabalus serpentarius</i>	Endangered



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BioMap: Species and Natural Communities

Nantucket

Mattamuskeet Panic-Grass	<i>Dichanthelium dichotomum</i> ssp. <i>mattamuskeetense</i>	Endangered
Nantucket Shadbush	<i>Amelanchier nantucketensis</i>	Special Concern
New England Blazing Star	<i>Liatris scariosa</i> var. <i>novae-angliae</i>	Special Concern
Oysterleaf	<i>Mertensia maritima</i>	Endangered
Purple Cudweed	<i>Gamochaeta purpurea</i>	Endangered
Purple Milkweed	<i>Asclepias purpurascens</i>	Endangered
Reticulate Nut-Sedge	<i>Scleria reticularis</i>	Watch Listed
Saltpond Grass	<i>Leptochloa fusca</i> ssp. <i>fascicularis</i>	Threatened
Sandplain Blue-Eyed Grass	<i>Sisyrinchium fuscatum</i>	Special Concern
Sandplain Flax	<i>Linum intercursum</i>	Special Concern
Sea-Beach Knotweed	<i>Polygonum glaucum</i>	Special Concern
Slender Marsh Pink	<i>Sabatia campanulata</i>	Endangered
St. Andrew's Cross	<i>Hypericum hypericoides</i> ssp. <i>multicaule</i>	Endangered
Three-Angled Spike-Sedge	<i>Eleocharis tricostrata</i>	Endangered
Torrey's Beak-Sedge	<i>Rhynchospora torreyana</i>	Endangered
Two-Flowered Rush	<i>Juncus biflorus</i>	Watch Listed

Invertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Barrens Buckmoth	<i>Hemileuca maia</i>	Special Concern
Barrens Daggermoth	<i>Acronicta albarufa</i>	Threatened
Chain Dot Geometer	<i>Cingilia catenaria</i>	Special Concern
Coastal Heathland Cutworm	<i>Abagrotis nefascia benjamini</i>	Special Concern
Coastal Swamp Metarranthis Moth	<i>Metarranthis pilosaria</i>	Special Concern
Gerhard's Underwing Moth	<i>Catocala herodias gerhardi</i>	Special Concern
Melsheimer's Sack Bearer	<i>Cicinnus melsheimeri</i>	Threatened
Pine Barrens Zale	<i>Zale</i> sp. 1 near <i>lunifera</i>	Special Concern
Pink Sallow	<i>Psectraglaea carnosae</i>	Special Concern
Purple Tiger Beetle	<i>Cicindela purpurea</i>	Special Concern



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BioMap: Species and Natural Communities

Nantucket

Sandplain Euchlaena	<i>Euchlaena madusaria</i>	Special Concern
Sensitive Rare Invertebrate		
Southern Ptichodis	<i>Ptichodis bistrigata</i>	Threatened
Spiny Oakworm	<i>Anisota stigma</i>	Special Concern
Straight-lined Mallow moth	<i>Bagisara rectifascia</i>	Special Concern
Water-Willow Stem Borer	<i>Papaipema sulphurata</i>	Threatened

Vertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Arctic Tern	<i>Sterna paradisaea</i>	Special Concern
Barn Owl	<i>Tyto alba</i>	Special Concern
Eastern Spadefoot	<i>Scaphiopus holbrookii</i>	Threatened
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Threatened
Least Tern	<i>Sterna antillarum</i>	Special Concern
Northern Harrier	<i>Circus cyaneus</i>	Threatened
Piping Plover	<i>Charadrius melodus</i>	Threatened
Short-eared Owl	<i>Asio flammeus</i>	Endangered
Spotted Turtle	<i>Clemmys guttata</i>	Special Concern

Core Habitat BM1500

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Small Site for Rare Plant		

Core Habitat BM1501

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Small Site for Rare Plant		



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BioMap: Species and Natural Communities

Nantucket

Core Habitat BM1502

Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Sandplain Grassland		Critically Imperiled

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
American Sea-Blite	<i>Suaeda calceoliformis</i>	Special Concern
Nantucket Shadbush	<i>Amelanchier nantucketensis</i>	Special Concern
New England Blazing Star	<i>Liatris scariosa</i> var. <i>novae-angliae</i>	Special Concern
Oysterleaf	<i>Mertensia maritima</i>	Endangered
Sea-Beach Knotweed	<i>Polygonum glaucum</i>	Special Concern

Invertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Chain Dot Geometer	<i>Cingilia catenaria</i>	Special Concern
Coastal Heathland Cutworm	<i>Abagrotis nefascia benjamini</i>	Special Concern
Dune Noctuid Moth	<i>Oncocnemis riparia</i>	Special Concern
Purple Tiger Beetle	<i>Cicindela purpurea</i>	Special Concern
Straight-lined Mallow moth	<i>Bagisara rectifascia</i>	Special Concern

Vertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Threatened
Least Tern	<i>Sterna antillarum</i>	Special Concern
Northern Harrier	<i>Circus cyaneus</i>	Threatened
Piping Plover	<i>Charadrius melodus</i>	Threatened
Short-eared Owl	<i>Asio flammeus</i>	Endangered
Spotted Turtle	<i>Clemmys guttata</i>	Special Concern



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BioMap: Species and Natural Communities

Nantucket

Core Habitat BM1503

Vertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Least Tern	<i>Sterna antillarum</i>	Special Concern
Piping Plover	<i>Charadrius melodus</i>	Threatened

Core Habitat BM1505

Natural Communities

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Sandplain Grassland		Critically Imperiled
Sandplain Heathland		Critically Imperiled

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
American Sea-Blite	<i>Suaeda calceoliformis</i>	Special Concern
Bristly Foxtail	<i>Setaria parviflora</i>	Special Concern
Bushy Rockrose	<i>Helianthemum dumosum</i>	Special Concern
Eastern Silvery Aster	<i>Symphotrichum concolor</i>	Endangered
Lion's Foot	<i>Nabalus serpentarius</i>	Endangered
Nantucket Shadbush	<i>Amelanchier nantucketensis</i>	Special Concern
New England Blazing Star	<i>Liatris scariosa</i> var. <i>novae-angliae</i>	Special Concern
Papillose Nut-Sedge	<i>Scleria pauciflora</i> var. <i>caroliniana</i>	Endangered
Purple Needlegrass	<i>Aristida purpurascens</i>	Threatened
Pygmyweed	<i>Crassula aquatica</i>	Threatened
Saltpond Pennywort	<i>Hydrocotyle verticillata</i>	Threatened
Sandplain Blue-Eyed Grass	<i>Sisyrinchium fuscatum</i>	Special Concern
Sea-Beach Knotweed	<i>Polygonum glaucum</i>	Special Concern



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BioMap: Species and Natural Communities

Nantucket

Invertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Chain Fern Borer Moth	<i>Papaipema stenocelis</i>	Threatened
Water-Willow Stem Borer	<i>Papaipema sulphurata</i>	Threatened

Vertebrates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Least Tern	<i>Sterna antillarum</i>	Special Concern
Northern Harrier	<i>Circus cyaneus</i>	Threatened
Pied-Billed Grebe	<i>Podilymbus podiceps</i>	Endangered
Piping Plover	<i>Charadrius melodus</i>	Threatened
Short-eared Owl	<i>Asio flammeus</i>	Endangered
Spotted Turtle	<i>Clemmys guttata</i>	Special Concern

Core Habitat BM1506

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Small Site for Rare Plant		

Core Habitat BM1507

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Small Site for Rare Plant		

Core Habitat BM1508

Plants

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Small Site for Rare Plant		



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BioMap: Species and Natural Communities

Nantucket

Core Habitat BM1509

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1510

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1511

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1512

Plants

Common Name

Scientific Name

Status

Sea-Beach Knotweed

Polygonum glaucum

Special Concern

Vertebrates

Common Name

Scientific Name

Status

Common Tern

Sterna hirundo

Special Concern

Least Tern

Sterna antillarum

Special Concern

Piping Plover

Charadrius melodus

Threatened

Shorebird Migration Habitat

Core Habitat BM1513

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant



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BioMap: Species and Natural Communities

Nantucket

Core Habitat BM1514

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1515

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1516

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1517

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1518

Plants

Common Name

Scientific Name

Status

Nantucket Shadbush

Amelanchier nantucketensis

Special Concern

Vertebrates

Common Name

Scientific Name

Status

Long-eared Owl

Asio otus

Special Concern



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BioMap: Species and Natural Communities

Nantucket

Core Habitat BM1519

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1520

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1521

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1522

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1523

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1524

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant



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BioMap: Species and Natural Communities

Nantucket

Core Habitat BM1526

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1527

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1528

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant

Core Habitat BM1529

Plants

Common Name

Scientific Name

Status

Small Site for Rare Plant



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BioMap: Core Habitat Summaries

Nantucket

Core Habitat BM1482

This Core Habitat, located at the northeastern corner of Nantucket, contains an extensive Maritime Dune Community, whose sand dunes support interesting rare plant species, such as Prickly Pear cactus and globally rare Sea-Beach Knotweed. In addition to sandy beaches and dunes, habitats here include intertidal flats, salt marshes, salt ponds, and extensive coastal shrublands and thickets. Together these areas provide breeding habitat for rare coastal waterbirds, as well as migration habitat for a variety of bird species.

Natural Communities

This Core Habitat contains an extensive Maritime Dune community. The Maritime Dune community consists of patches of herbaceous plants interspersed with areas of bare sand and shrubs. It occurs on windswept dunes within the salt spray zone, and often grades into shrubland or woodlands on more sheltered back dunes. Here the dune system is not crowded by development, and so moves and changes as natural processes dictate. It is vegetated with a good representation of native species, and is only minimally affected by human disturbances. It includes a small, high-quality Maritime Juniper Woodland with excellent surrounding natural landscape. The Maritime Juniper Woodland/Shrubland is a predominantly evergreen community within the coastal salt spray zone. The trees tend to be short (less than 15 feet) and scattered, and the tops of trees and shrubs are sculpted by winds and salt spray.

Plants

This unique Core Habitat contains all three native populations of the Prickly Pear cactus in Massachusetts. It is the only cactus native to the northeast. Also present is the globally rare Sea-Beach Knotweed, a low plant of shifting sand dunes. Two of the very best populations of American Sea-Blite, another low coastal species of sandy shores, occur here as well.

Vertebrates

This Core Habitat contains extensive breeding habitat for Piping Plovers, Least Terns, and American Oystercatchers on sandy beaches and overwash areas. In some years, Common Terns also nest on wide, sparsely vegetated areas of beach south of Great Point or at The Galls. These beach-nesting birds and their habitats require annual protection from human recreational activities, especially off-road vehicles. Feral cats have become a significant factor limiting plover and tern abundance and reproductive success on these beaches, making necessary regular live-trapping and removal. A large nesting colony of Great Black-backed Gulls and Herring Gulls is present in the dunes along the barrier beach at Coatue. Northern Harriers likely nest and forage in dunes and shrublands. Intertidal areas and adjacent beaches provide important migration habitat for several species of arctic-nesting shorebirds. Shrublands and woodlands near The Glades provide coastal migration habitat for a variety of landbirds.



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BioMap: Core Habitat Summaries

Nantucket

Core Habitat BM1497

Vertebrates

This Core Habitat encompasses all of Muskeget Island, lying northwest of Tuckernuck Island and Nantucket. Its sandy beaches, brackish lagoon, low rolling dunes, and small interdunal wetlands provide important breeding and foraging habitat for a variety of coastal waterbirds and raptors. The island contains breeding habitat for Piping Plovers, Least Terns, Common Terns, American Oystercatchers, and, in some years, Roseate Terns. This island is the site of an active tern restoration program. Extensive low vegetated dunes support a large nesting colony of Great Black-backed Gulls, Herring Gulls and, formerly, Laughing Gulls. Northern Harriers and Short-eared Owls forage on the island and may occasionally nest here.

Core Habitat BM1498

This large Core Habitat, located on the eastern and southern portions of Nantucket, contains extensive Sandplain Heathlands, Sandplain Grasslands, and other natural communities that together support a wide array of plants and animals. There are more than 30 species of rare plants, and at least 14 rare moth species found within this Core Habitat. The grasslands and heathlands provide some of the most important habitat for Northern Harriers and Short-eared Owls in the northeastern United States. These habitats also support Eastern Spadefoot Toads, and the beaches here are major nesting areas for Piping Plovers and Least Terns. More than half of this Core Habitat is protected, and further protection of the remaining areas will help ensure the long-term viability of the rare species found here.

Natural Communities

This large Core Habitat contains many exemplary natural communities, including over 100 acres of Sandplain Heathlands in excellent condition and well-buffered by natural vegetation. Sandplain Heathlands are open, shrub-dominated, coastal communities. They share many species with Sandplain Grasslands, but also have many plants from the Heath family. They often have sparse clumps of plants with bare soil or lichen between them. This Core Habitat also contains a high-quality Kettlehole Level Bog worthy of statewide recognition not only due to its excellent condition and lack of disturbances, but also because it is one of only two moated, floating bogs on Nantucket. Good Sandplain Grasslands and Coastal Salt Pond communities also contribute diversity to the mosaic of natural communities in this Core Habitat.

Plants

More than 30 species of rare plants make their home within this large Core Habitat. They inhabit a number of diverse community types and situations. Concentrations of rare plant species are found in areas of sandplain grassland, which support Bushy Rockrose, Sandplain Blue-Eyed Grass, Lion's Foot, Purple Cudweed, and Eastern Silvery Aster. Abundant along small roadsides and other open areas is the otherwise rare Nantucket Shadbush. Shores of small kettleponds support rare plants such as Torrey's Beak-Sedge and Creeping St. John's-Wort.



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BioMap: Core Habitat Summaries

Nantucket

Invertebrates

This Core Habitat supports more than a dozen invertebrate species that are listed as Endangered, Threatened, or Species of Special Concern in Massachusetts, including 14 species of moths. These invertebrates represent a unique and threatened biota; for example, the Southern Ptichodis moth is not known to occur anywhere in Massachusetts except the offshore islands of Nantucket and Martha's Vineyard. Besides barrens species such as Melsheimer's Sack Bearer moth, the Barrens Daggermoth, and Gerhard's Underwing moth, this Core Habitat includes various other habitats for rare invertebrates, including heathlands inhabited by species such as the Pink Sallow moth and the Chain Dot Geometer moth; acidic shrub swamps and kettlehole bogs that are habitat for the Coastal Swamp Metarranthis moth and the Water-willow Stem Borer moth; sandplain grasslands that provide habitat for the Southern Ptichodis moth; and marshes inhabited by the Straight-lined Mallow moth.

Vertebrates

The extensive grasslands and heathlands within this Core Habitat comprise some of the most important nesting and foraging habitat for Northern Harriers and Short-eared Owls in the northeastern U.S. Low Beach is one of the major nesting areas for Piping Plovers and Least Terns on the island, and beaches at Wauwinet, Squam Pond, Sesachacha Pond, and Tom Nevers also provide habitat for one or both of these species. The beach at Surfside also supported breeding Piping Plovers and a nesting colony of Least Terns as recently as the 1980's. However, these birds have not nested here in recent years, likely due to disturbance and habitat degradation caused by high levels of unmanaged recreational activity, especially off-road vehicles. Installing fencing to protect suitable nesting habitat on the upper beach and imposing seasonal restrictions on off-road vehicles are needed if nesting plovers and terns are to be restored to this site.

Eastern Spadefoot toads inhabit the sandplain grasslands and shallow emergent wetlands in the vicinity of Madequecham Valley. Squam Swamp and scattered wetlands to the south and east of Wauwinet Road and north of Quidnet Road constitute the largest area of habitat for Spotted Turtles on Nantucket.

Core Habitat BM1502

This Core Habitat encompasses Tuckernuck Island, which contains a variety of natural communities, including rare Sandplain Grasslands. These diverse habitats support many coastal species of rare moths, tiger beetles, and plants. Tuckernuck Island is one of the state's most important sites for Northern Harriers and Short-eared Owls, and it provides breeding habitat for rare coastal waterbirds. Conservation of the remaining unprotected land within this Core Habitat would help ensure the long-term viability of the rare species found here.

Natural Communities

This Core Habitat contains over 100 acres of high-quality Sandplain Grassland, covering much of the southern portion of Tuckernuck Island. Sandplain Grasslands are found on rolling plains and generally occur on sandy, dry, poor soils. Larger examples of this community type are found near the ocean and within the influence of winds and salt spray. Here the very rare natural community type is well-maintained by prescribed fire, is minimally impacted by invasive species, and is well-buffered by a variety of maritime communities and an ocean bluff.



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BioMap: Core Habitat Summaries

Nantucket

Plants

Tuckernuck Island supports several rare plant species adapted to life along the ocean shore. Sea-Beach Knotweed, Oysterleaf, and American Sea-Blite are all low, sprawling plants of sandy shores and dunes.

Invertebrates

Tuckernuck Island has a variety of natural communities such as dunes, heathlands and other maritime shrublands, and salt marshes, all of which are important habitat for rare coastal insect species including the Coastal Heathland Cutworm moth, the Straight-lined Mallow moth, the Chain Dot Geometer moth, the Dune Noctuid moth, and the Purple Tiger Beetle. It is likely that Tuckernuck Island is inhabited by other rare coastal moth species such as the Drunk Apamea moth, the Spartina Borer moth, and other species.

Vertebrates

Tuckernuck's extensive sandplain grasslands and maritime heathlands provide some of the most important nesting and feeding habitat for Northern Harriers and Short-eared Owls in Massachusetts. Grasshopper Sparrows are also present during the breeding season in some years. Constantly shifting beaches and sand spits along the southern and western shores provide breeding habitat for Piping Plovers, Least Terns, and American Oystercatchers. Vegetated dunes along the western edge of the island support a nesting colony of Great Black-backed Gulls, and Spotted Turtles also occur on the island. Conservation needs here include better protection of coastal waterbirds from off-road vehicles and dogs, and protection of upland habitats from additional loss and fragmentation caused by home building.

Core Habitat BM1503

Vertebrates

The sandy beach and low dunes of Quaise Point provide nesting habitat for Piping Plovers and Least Terns.



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BioMap: Core Habitat Summaries

Nantucket

Core Habitat BM1505

This Core Habitat on Nantucket encompasses a large Sandplain Heathland community, a smaller Sandplain Grassland community, and a mosaic of other habitats, including ponds, scattered wetlands, beaches, dunes, salt marshes, and intertidal flats. Together these diverse habitats provide some of the most important areas in the state for Short-eared Owls and Northern Harriers, as well as breeding and migration habitat for a variety of bird species, including rare coastal waterbirds. These habitats also support a wide variety of rare plant and rare moth species that are adapted to Nantucket's unusual environment. Much of this Core Habitat is owned by the Nantucket Conservation Foundation and other conservation organizations. Protecting the remaining areas of the Core Habitat will help ensure the long-term viability of the rare species inhabiting the area.

Natural Communities

This Core Habitat contains over 100 acres of Sandplain Heathland that are free of exotic species and are well-buffered within a larger complex of maritime communities. Together these communities provide excellent habitat for many monitored bird populations. Sandplain Heathlands are open, shrub-dominated, coastal communities. They share many species with Sandplain Grasslands, but also have many plants from the Heath family. They often have sparse clumps of plants with bare soil or lichen between them. This Core Habitat also contains a small, although excellent-quality, Sandplain Grassland.

Plants

Several rare plants, mostly all adapted to sandplain grasslands, are found within this Core Habitat. Species characteristic of open sandplain grasslands include Bushy Rockrose, Sandplain Blue-Eyed Grass, Lion's Foot, and Eastern Silvery Aster. Coastal species, such as Saltpond Pennywort, Bristly Foxtail and Purple Needlegrass are found here near the ocean shore.

Invertebrates

This Core Habitat includes bogs, swamps, and other shallow freshwater wetlands with Chain Fern and Water-willow that are habitat for rare moths such as the Chain Fern Borer and the Water-willow Stem Borer. The Water-willow Stem Borer moth is a Threatened species that is found nowhere in the world outside of Massachusetts; it has been known to inhabit the area within this Core Habitat for over 60 years. The Chain Fern Borer moth has not been observed in this area since 1940, but it is likely that it still persists here.



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BioMap: Core Habitat Summaries

Nantucket

Vertebrates

Collectively, the grasslands and shrublands in this Core Habitat provide some of the most important nesting and foraging habitat in the state for Short-eared Owls and Northern Harriers. Extensive diverse shrublands and woodlands north of Ram Pasture and Clark Cove provide breeding habitat for a variety of shrubland-nesting songbirds and migration habitat near the coast for many species of landbirds. Piping Plovers and, in some years, Least Terns nest on beaches at Eel Point and Hummock Pond. Intertidal flats at Eel Point provide valuable migration habitat for arctic-nesting shorebirds.

Grasslands and heathlands along Eel Point Road continue to be fragmented and destroyed by construction of large homes. Construction of homes on even small in-holdings here and at the Head of the Plains can discourage Short-eared Owls and Northern Harriers from nesting. Breeding plovers and terns require annual protection from human-caused mortality and disturbance, especially from off-road vehicles. Feral cats pose an increasing risk to breeding, migrating, and over-wintering birds of many species, including state-listed rare raptors and shorebirds.

Core Habitat BM1512

This Core Habitat encompasses sandy beaches, sandspits, intertidal areas, and small salt marshes at the southwest corner of Nantucket Island. This is one of the most important breeding sites for Piping Plovers and Least Terns in Massachusetts. It also provides breeding, feeding, and migration habitat for a variety of other bird species, and it supports the rare Sea-Beach Knotweed.

Plants

A population of the globally rare Sea-Beach Knotweed is growing along the shore of this point.

Vertebrates

Smith Point is one of the most important breeding sites for Piping Plovers and Least Terns in Massachusetts. Small numbers of Common Terns and a small colony of Great Black-backed Gulls and Herring Gulls nest here as well. The beaches and intertidal areas of Smith Point and Madaket Harbor provide important migration habitat for a variety of shorebirds and terns from July through September. Northern Harriers forage in the diverse coastal habitats contained within this Core Habitat. The principal conservation need here is continued protection of breeding and migrating waterbirds from human-caused disturbance, especially from off-road vehicles and dogs.

Core Habitat BM1518

Plants

A population of the globally rare Nantucket Shadbush is found here along a sandy roadside.

Vertebrates

This forested habitat supports Long-eared Owls and provides migration habitat for a variety of landbirds. Without protection, the value of this Core Habitat as bird habitat will decline if it becomes an increasingly isolated patch of forest surrounded by human development.



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Living Waters: Species and Habitats

Nantucket

Core Habitat LW157

Exemplary Habitats

Common Name

Scientific Name

Status

Lake/Pond Habitat

Core Habitat LW158

Exemplary Habitats

Common Name

Scientific Name

Status

Lake/Pond Habitat

Core Habitat LW159

Exemplary Habitats

Common Name

Scientific Name

Status

Lake/Pond Habitat

Core Habitat LW320

Exemplary Habitats

Common Name

Scientific Name

Status

Fish Habitat



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Living Waters: Core Habitat Summaries

Nantucket

Core Habitat LW157

Maxcy Pond is an inland pond on Nantucket with only moderate amounts of development in its adjacent riparian areas and watershed. More than 20 families of invertebrates were found at the site, suggesting this pond's aquatic habitats support a diversity of invertebrate species.

Core Habitat LW158

Head of Hummock Pond is an inland pond on Nantucket with only moderate amounts of development in its adjacent riparian areas and watershed. In an initial search, five families of invertebrates were found at the site, and this particular group of invertebrates suggests that aquatic habitats here have not been adversely impacted by human activities.

Core Habitat LW159

The northern of the two Pout Ponds on Nantucket is a very small inland pond. In a 2002 survey, the pond was found to support 15 families of invertebrates, suggesting this small site supports freshwater habitats for a variety of invertebrate species.

Core Habitat LW320

Sesachacha Pond contains spawning (breeding) habitats for Alewife, an anadromous fish that migrates from coastal waters into fresh waters to spawn. This and other migrating fish species are important components of Massachusetts' aquatic biodiversity.



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